REMARKS

Applicants respectfully requests reconsideration of the present application in view of the foregoing amendments and these remarks.

Amendments to the specification

In the specification, the paragraph bridging pages 7 and 8 has been amended to delete one comma after the word "histidine."

Status of the claims

Claims 1-10 are cancelled presently, and claims 11 - 15 are added. Support for claim 11 is found at page 2, lines 21-23, page 7, lines 4-15, page 8, lines 3-10 and page 8, line 29 to page 9, lines. Support for claims 12-15 is evident, for example, in the original claims.

Objection to the specification

The examiner objects to an amendment filed on April 23, 2008, for deleting glutamine and asparagine from an exemplary list of basic amino acids in the specification. The examiner alleges that removing glutamine and asparagine constitutes new matter because applicants are "suggesting that the amino acids glutamine and asparagine are no longer being considered to be 'basic amino acids' according to the instant invention." Action at page 2, item 7.

The knowledgeable reader would understand, however, that the listing in question does not embody applicants' "suggestion" of something endemic to the instant invention. Rather, the listing would be seen, correctly, as an enumeration of what is common knowledge in the art, namely, the identify of those amino acids called "basic" (*a/k/a* "dibasic) because they containing a second basic (typically, an amino) group, as distinguished from "acidic amino acids," so called because they have a second carboxyl group. For example, see BIOCHEMISTRY BY L. STRYER. (4TH EDITION) W.H. FREEMAN & CO. (1995).

Thus, it is common knowledge that the category of "basic amino acids" includes lysine, arginine, and histidine, plus their derivatives and byproducts, including citrulline. By the same token, the amendment filed on April 23, 2008, should be understood to correct a wholly apparent

error, namely, the inclusion of art-recognized acidic amino acids, glutamine and asparagine, is a list expressly denominated for "basic amino acids."

Accordingly, the amendment at issue corrects an error that is "obvious" under the PTO's own rules. That is, "one skilled in the art would not only recognize the existence of error in the specification ... but also the appropriate correction," and so the amendment "does not constitute new matter." MPEP § 2163.07 (II), *citing In re Odd*, 443 F.2d 1200 (CCPA 1971). Applicants therefore request withdrawal of this objection.

The examiner also objects to the specification because there are two commas following "histidine" in the paragraph bridging pages 7-8. The present amendment to the specification corrects this obvious error, and so applicants request withdrawal of this objection, too.

Objections to the claims

The examiner objects to claims 4 and 6 for failing to refer properly to other claims in the alternative. Moreover, claims 6 is subject to objection for improper multiple dependency. The present claims embody both antecedent basis and multiple dependency that are proper. Since the claims now conform with U.S. practice, applicants request withdrawal of these objections.

The examiner objects to claim 1, alleging ill-clarity for lacking active method steps. Since the present claims are not open to this objection, applicants request its withdrawal.

The examiner objects to claims 2-6, alleging lack of clarity and suggesting alternatives language. These present claims are believed to comport with the examiner's suggestion, and applicants therefore request withdrawal of the objection.

Claim Rejections under 35 U.S.C. § 112

Claims 1-6 stand rejected under the second paragraph of Section 112, for alleged indefiniteness. While not acquiescing to the examiner's rationale for this rejection, applicants have amended the claims to recite the invention more clearly and, as noted above, to provide proper antecedent basis. The examiner's rejection is rendered moot, therefore, and applicants request its withdrawal.

Claim Rejections under 35 U.S.C. § 103

A. Claims 1 and 4-6 stand rejected over Borque *et al.*, *Eur. J. Clin. Chem. Clin. Biochem.* 31: 869-74 (1993), in view of de Steenwinkel *et al.*, U.S. Patent No. 4,362,531, and Metzner *et al.*, U.S. Patent No. 6,447,774. According to the examiner, Borque discloses a turbidimetric immunoassay that meets applicants' claim recitations but for the omission of a basic amino acid addition in the prior-art assay system.

To bridge this acknowledged gap between the prior art and the claimed invention, the examiner relies on (i) de Steenwinkel, for disclosing an immunoassay that incorporates a chaotrophic agents to disrupt protein-protein interactions, and (ii) Metzner, for disclosing the use of arginine as a chaotrophic agent to improve protein solubility. In particular, the examiner is heard to assert obviousness in what she views as applicants' "selection of known material," the basic amino acid arginine, "for its known purpose" as an immunoassay constituent. Action at page 7, lines 8 and 9.

The examiner's stated position overlooks, however, applicants' discovery that the use of a sufficiently high antibody and basic amino acid concentration, as presently recited, allows for immunoassaying a plurality of lipoprotein(a) phenotypes. The specification teaches that antibody concentrations typically range from 0.05 to 0.1 mg/ml in a conventional turbidimetric immunoassay (see page 7, lines 7-12 and lines 23-25). To the contrary, the presently claimed method involves an antibody concentration of at least 0.15 mg/ml. Likewise, the present claims prescribe a basic amino acid concentration that is about 12% or greater, whereas the prior art illustrated by Metzner discloses addition of arginine at the much lower concentrations of 2% and 5%, respectively (see column 2, line 44 and column 4 lines 40-43).

Thus, no permutation of disclosures reasonably gleaned from the cited references would have suggested either these high concentrations nor the surprising result of detecting a broader range of lipoprotein(a) phenotypes. Indeed, de Steenwinkel expressly cautions that inclusion of high concentrations of chaotropic agents, such as the basic amino acid arginine, is deleterious to immunoassays (see column 3, lines 23-25). If anything, therefore, the art of record teaches away from the presently claimed method. For at least these reasons, applicants request the rejection be withdrawn.

B. Claims 2-3 stand rejected over Borque *et al.* in view of de Steenwinkel *et al.* and Metzner *et al.*in view of Schmidtberger *et al.*, U.S. Patent No. 5,180,679. The examiner cites Schmidtberger for disclosing that variable amounts of antibody can be bound to particles used in an immunoassay, in order to influence agglutination time. Action at page 8, lines 11-13.

In fact, Schmidtberger teaches adjusting antibody concentration in order to account for variations in antibody titer (column 2, lines 46-63). Yet, Schmidtberger does not contemplate adjusting an antibody concentration to alter antigen detection, as presently recited, much less allow for measuring a plurality of lipoprotein(a) phenotypes. Schmidtberger thus fails to cure any of above-discussed deficiencies in cited combination of references. Applicants request withdrawal of this rejection, therefore.

CONCLUSION

In light of the foregoing, applicants submit that the present claims are non-obvious and that this application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested, therefore. Examiner Foster is invited to contact the undersigned directly, should she feel that any issue warrants further considerations.

The Commissioner is hereby authorized to charge any additional fees, which may be required under 37 C.F.R. §§ 1.16-1.17, and to credit any overpayment to Deposit Account No. 19-0741. Should no proper payment accompany this response, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If any extension is needed for timely acceptance of submitted papers, then applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of the relevant fee(s) from the deposit account.

Respectfully submitted,

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